

PLANTAE MESOAMERICANAE NOVAE. V.*

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Blechnum (*Eublechnum*) *lellingieranum* L.D.Gomez sp. nov. Herba parva, rupicola, caudice reducto stolones emittens, paleis ferrugineis integris vel sparse dentatis dense oblecto; stipitibus 10-30 mm longis, rufescentis, teretes; fronde sterile 40-50 mm longa, 0.8-1.3 cm lata, utroque angustata, lanceolata, integra; fronde fertile longe lanceolata, acuminata, pinnata, 5.6-10 cm longa, 0.6-1 cm lata, pinnis basalibus 2, ellipticis, integris, quasi sessiles. Sori plerumque costam proximi.

HOLOTYPUS. In scopulis udis muscosis, prope rima Camaron loco dicto Coton, 1300 m.s.m. provinciam Puntarenas, Gomez 18139 (CR). ISOTYPUS US. PARATYPI. MO, F.

Of the *Blechnum lanceola* alliance it differs from it in its much reduced dimensions, the non-decurrent terminal pinnae, the discreet, sterile pair of basal pinnae of the fertile frond which are shortly petioled and always free from the rachis. In *B. lanceola* Sw. the fertile frond is entire or at most has adnate, basal lobes. In 1896 H. Christ (Bull. Soc. bot. roy. Belg. 35:123) named a collection by Pittier (3546) as *B. lanceola* Sw. var. *trifoliatum* Hk. & Baker, and annotated the specimen as follows: "Serait-ce une variété ou un état jeune de *B. longifolium*?" . In 1901 (Prim. Fl. Cost. 3(1):23) he incorrectly reduced the same collection and another specimen to *B. longifolium* Willd., a synonym of *B. fraxineum* whose young plants resemble the species here described. This remarkable miniature is named in honor of David B. Lellingier of the U.S. National Herbarium, whose devoted study of tropical pteridophytes has yielded much new knowledge and whose expert advise is always available to friends.

Blechnum (*Lomaria*) *microlomaria* L. D. Gomez sp. nov. *Lomaria pusilla*, caudice 20-50 mm longo, erecto, 10-15 mm crasso, stolonifero, paleis nicotianeis integris, lanceolatis, acutis vestito; stipitibus 10-(21.7)-43 mm longis, 1 mm crassis, fasciculatis, sulcatis, brunneovinosus; fronde sterile 90-(139)-225 mm longa, 14-(22)-31 mm lata, utroque gradualiter angustata, anguste-elliptica, submembranosa, pinnatisecta' pinnis adnatis 11-23-jugatis, proximis (primum visum lobulata), medialibus 10-19 mm longis, 5.5-8 mm latis, integris, obtusis, basalibus 4-9-jugis reductis, apicalibus oblongis, obtusis, 10-30 mm longis, 5-6 mm latis; venis 5-7-jugatis, liberis, conspicuis, basalibus e medio plerumque furcatis; fronde fertile 200 mm longa, 15-20 mm lata, stipite 250 mm alta; pinnata, frondis paribus (15) oppositis vel suboppositis inter se 35-50 mm remotis infimis remo-

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tioribus, pinnis medialibus 10-13 mm longis, 1.5-2 mm latis, revolutis, non cuspidatis. Indusium integrum.

HOLOTYPE. Planta ad saxa vulcanica fontes fluvii Mancaron supra 2000 m s.m. V. Barva provinciam Heredia lecta, Gomez 18158, CR. ISOTYPI. MO, US, F.

Of the group of *B. (Lomaria) lehmannii* Hieron., it resembles *B. stoloniferum* (Fourn.) Mett. ex C. Chr. of Mexico and northern Guatemala and *B. mexiae* Copel. of Brasil. From the former it differs by its smaller dimensions, color of stipes and rachises, its fewer and conspicuous veins, its pinnate fertile frond with almost filiform segments the basal ones almost vestigial. In *B. mexiae* the segments are more distant and, as in *B. stoloniferum*, the rhizome is creeping and much longer. Large populations of this small lomarioid have been found in the type locality.

Lindsaea (Lindsaea, Decrescentes) venustissima L. D. Gomez, sp. nov. Herba. Folia bipinnata, petiolo stramineo facie abaxiali tereti; lamina herbacea, laetevirens subtus glaucescens, pinnulis anguste lanceolatis, longitudine latitudine 9-10-ies superante, apice protractus; soris continuis, indusio integro marginem non attingente.

HOLOTYPE. Forest and forest remnant to 12 km NW of Santa Fe, Province of Veraguas, Panama, W.G.D'Arcy 10300 (MO).

Fronds up to 1 m tall. Lamina bipinnate, 35-40 cm long, 25-30 cm wide, deltoid in outline, with 2-3-or more pinnae to a side and a conform terminal one. Pinnae alternate, distant, ascending, stalked, widest in lower third, abruptly narrowed at base, gradually tapering to apex. Pinnules 20-25 to a side, shortly petiolulate (1.5-2 mm), ascending, 4.5-5 cm long, 4-5 mm wide. Inner margin straight ± parallel to rachis, lower base cuneate, upper base rectangular, upper margin shallowly concave-straight, outer margins both soriferous almost to apex which is bluntly rounded. Veins immersed, 1-forked, main vein nearly straight. Lowermost 1-2-pairs of pinnules very reduced, dimidiate, terminal segment oblong, 1-2-lobed, sterile. Indusium thick-membranose, not reaching margin. Spores (19.5)20(21.5)µm, citrine, tetrahedric.

A near relative of *L. taeniata* Kramer, endemic to Colombia. *L. taeniata* is also bipinnate but with only 1-2 pinnae/side, subopposite, only slightly narrowed at base and abruptly narrowed in apical third, the pinnules are sessile, subfalcate or perpendicular to rachis; the terminal segment is narrowly lanceolate, subhastate-lobed, up to 3.5 cm long, often caudate obtuse. The indusium is pale, delicate and the spores average 22µm, almost hyaline.

Tectaria neotropica L. D. Gomez, sp. nov. Herba rhizomate repens, paleaceum, paleis clathratis, ferrugineis, lanceolatis, acuminatis, vestito. Petioli atropurpurei, gracili, 15-20 cm longi paleis iis rhizomatis aequalibus sparse praediti. Lamina herbacea, deltoidea, inferne 2-pinnatisecta superne pinnatisecta. Rachis costaeque utrinque dense pilosis, pilis articulatis, 6-cellulatis, hyalinis. Venae liberae. Sori indusiati, indusia reniformia, eroso-ciliati, hyalini. Sporangia longe stipitata annulo e cullulis ca. 13 composito. Sporae brunneae bilaterales, 31 X 21µm, echinatae.

HOLOTYPE. Trail from Rio San Juan to Rio Tife Falls; elev. 1200 - 2500 ft. Fern on rock face in deep shade, wet forest, Province of Coclé, Panama B. Hammel 3348, CR. *ISOTYPUS*. *MO*. *PARATYPI*. Road from El Llano to Carti, 13.9 km N of Panamerican Highway, border of Panama and San Blas Provinces, 300-400 m. Folsom et al. 6174, CR, *MO*.

It is distinguished from all other continental species of the genus by its free veins, a character which brings it close to the formerly *Camptodium pedatum* from which it differs by its herbaceous texture, articulate hairs and echinate spores. At first I thought this plant represented a new species of *Adenoderris* but the lack of laminar viscosity and unicellular marginal hairs prevented that allocation. The new species is somewhat intermediate between *Ctenitis* and *Tectaria* and would fit in the generic concept *Ctenitopsis*, erected by Ching for oriental tectarids, except for its erose-ciliate indusia.

In 1953 E. B. Copeland erected the generic name *Hyalotricha* (American Fern J. 43:12-13) to place an unusual polypodioid described by H. Christ as *Polypodium anetioides* (Bull. Soc. bot. Genève 2.1:219. 1909). In 1949, R.W.G. Dennis described a new genus of inoperculate discomycetes (Helotiales, Hyaloscyphaceae) as *Hyalotricha* (Mycological Papers, C.M.I. 32:75) which, under provision of the Code, makes Copeland's name untenable. The name *Hyalotrichopteris* *nom. nov.*, based on Copeland's generic description (*loc. cit.*) and the combination *Hyalotrichopteris anetioides* (Christ) L. D. Gómez *comb. nov.* are here proposed. The fern is known from Costa Rica and Nicaragua, where it has been recently collected in Jinotega, between Las Camelias and La Salvadora, Stevens & Grijalva 15350, MO, CR.

Danaea crispa Reichb.f., was supposedly endemic to Costa Rica. A collection from Panama, Province of Coclé, El Copé (B. Hammel 986) corresponds to this peculiar species whose geographical distribution is thus enlarged. *Danaea wendlandii* has imparipinnate fronds, the pinnae have serrate margins and are non-crispate.

Echinodorus botanicorum L. D. Gómez & Gómez-L., *sp. nov.*, *species insignis habitus eleocharidis suis; a speciebus generis Nobis notis bene distincta.*

Planta aquatica, emersa, lactescens, rhizoma breve, folia radicalia. Folia usque ad 60 cm longa; petiolus 50-55 cm longus, 4-6 mm crassus, subteretes vel obscure trigonus; lamina petiolo breviorissima, 5-9cm longa, 4-6 mm lata, angustissime lanceolata, apice acuta, basi sensim in petiolum decurrens, 3-5-parallelonervia, tumida, laeviter sulcata; lineae marginisque pellucida. Inflorescentia folia aequantia vel paulo longiora; spicata, 4-6-verticillata, verticilli distanti, pauciflori; bracteae subliberae, lanceolatae, acutae, marginatae; flores maiusculi, sepala virides, albomarginata, late ovata, coriacea; petala alba, tenues, magna, sepalis circa duobus longiora, quam sepali duplo vel ca. triplo ampliora; stamina 12, filamenta linearia, antherae oblongae. Fructus subsphaerici, diam. 12-15 mm, fructiculi compressi, rostrati, 3-6-obscure costati, uni glandula ornati.

In stagnis viam ad oppidum Buenos Aires ca. 400 m s.m. provinciam Puntarenas incolat. Omnibus botanicorum Florae Mesoamericanae speciem hanc novam cordialiter dicamur. HOLOTYPE. L.D.Gomez 18131, CR. ISOTYPI. MO, K, F (legit. Barringer & Gomez). PARATYPE. M. Bermudez 741 USJ.

Rhynchospora Andresii Gomez-Laurito, sp. nov. Species facile cognoscenda ob culmus 180-250 cm altus; folia culmorum parum breviora, tricostrata, longitudinaliter profunde sulcata, 2.5-3 cm lata, flaccida' inflorescentia interrupta, 90-150 cm longa; achaenia facie porcata. Subg. Diplostyleae.

Planta caespitosa, rhizoma crassum, lignescens; culmus nodosus, 180-250 cm altus, trigonus, ca. 8 mm crassus, scabrus, internodiis 22-30 cm longis; folia plura radicalia, laminae culmorum parum breviora, 2.5-3 cm latae, herbaceae, flaccidae, multinervosae, tricostratae, e medio longitudinaliter profunde l-sulcatae, marginibus scabrellis, apicem acuminatae; vaginae ca. 22 cm longae, orae fimbriatae, fuscae; bractee folia similis, corymbus longe superantes, versus apicem abbreviatae; inflorescentia in parte superior culmorum, 90-150 cm longa, interrupta, 9-11-corymbosae; pedunculis exsertis, 2-5 cm longis, complanatis, marginibus scabris; corymbis lateralis 3-5 cm longis, 10-12 cm latis; corymbis terminalis abbreviatis, 2-3 cm longis, 6-8 cm latis; axis scabris; ramis ad apicem scabris; bracteolae linear-lanceolatae, 2-5 cm longae, evaginantes, marginibus scabris; spiculae solitariae vel 2-3-fasciculatae, ovoideae vel anguste ovoideo-ellipsoideae, 2-2.5 mm longae, ca. 1.3 mm latae, fuscae, l-nucigera; 3 glumae inferiores vacuae, inaequales, 1.2-1.8 mm longae; glumae nucigerae ovatae, apice obtusae, aliquando emarginatae, 2 mm longae, 1.5 mm latae, l-nerviae, fuscae, membranaceae, margine scariosae, hyalinae; stamina 3, filamenta plana, antherae 1.5 mm longae; stylus filiformis, profunde bifidus; stylopodium anguste conicum, 0.7-1 mm longum; achaenium 1.5 mm longum, 1.3-1.5 mm latum, ovatum vel late-ovatum, biconvexum, tumidum, facie porcatum, puncticulatum, castaneum vel fuscum, nitens; setae hypogynae 5-6, graciles, porphyreis, subaequalibus, 1.5-1.7 mm longibus.

HOLOTYPE. Orillas del Rio Sanguijuela, Parque Nacional Braulio Carrillo, Prov. San Jose, ca. 900 m s.m., Gomez-Laurito 8426 CR. ISOTYPI. F. PARATYPE. Gomez-Laurito 6452, 6451, 6544 CR.- ETYMOLGIA. Speciem pulchram novam c. Andreas f. primum onomasticum commemoro.

Erratum. In the Latin description of *Rhynchospora oreoboloidea* (Phytologia, 50(7):459-460, 1982) some words were left out: ; culmus intra folia absconditus, teretibus, rigidulus, sulcatus, foliatus; folia plura radicales, etc.. ; stylopodium anguste conicum, 0.5 mm longum, pallidum; achaenium oblongum, 2-2.3 mm longum, 1 mm crassum, etc..

Centropogon (*Centropogon*) *nubicola* Gomez-L. & L.D.Gomez, sp. nov. Antherae 2 inferiores apice appendice triangulari munitae. Ab affinis C. granulorum et C. congestus corollis candidis roseo-suffusis, glabris in corymbis, praeclare distinguitur.

Herba glabra, verisimiliter ramis elongatis vel scandentibus; folia

alterna, herbacea, viridia, elliptica, 13-17 cm longa, 6-7.5 cm lata, margine subcrenata distante serrata, apice abrupte acuminata, ad basim cuneata, petiolum brevissime decurrens, utrumque glabra; flores in corymbo (inflorescentia prima visa umbellata, axis vix 2 cm long.), 5-12-floribus, bracteato; bracteae subpanduratae, membranosae, asperiter nervosae, acutae, 1.5 cm longae, 4-6 mm latae, margine erosociliatae; pedicelli 1.2-2 cm longi, scabri, minutissime et sprasim ciliati, angustissime alati, alis hyalinis, basi minute bibracteolati; bracteolae fere 3 mm longae, falcatae vel quasi retroflexae; hypanthium depresso-globosum, glabrum; sepala deltoidea; ± 5 mm longa, margine minutissime denticulata, erecta, sinus inter ea acuti; corolla 4-5.5 cm longa, candida versus basim rubella; lobi lanceolati, acuminati, 2 superiores 3.5-5 mm longi, protracti plus minusve incurvati, quasi cornuti' filamenta in tubum ± 4 cm longum, angustum, glabrum connata; antherarum tubus 5-7 mm longus, versus apicis paucis pilis longiusculis, albidis, praeditus, in commissuris connectivis profuse griseo-sericeis; fructus ± 1 cm diametro; semina 0.8 mm longa, 0.6-0.7 mm lata, rotundato-inflata, fuscato-ferruginea, nitida, reticulato-foveolata.

HOLOTYPUS. Cerro Nubes, Volcan Miravalles, 1600 m s.m., Provincia de Alajuela. R. G. Campos in Gomez-L. 8860, CR. PARATYPI. ibidem, I. A. Chacon 74, CR, USJ.

Of all the Central American species of Centropogon subgenus Centropogon, its closest relative seem to be C. granulosus Presl from which it differs by its lack of granulation, color of the corolla, corymbose inflorescence, number of flowers, the indument of the anthers. Occasionally, it presents a solitary flower one or two nodes below the terminal inflorescence. Although the branches are scandent and somewhat pendent, the flowers are up-turned to facilitate access of the pollinators which we presume are hummingbirds. Isidro Chacón (pers. comm.) reported many individuals of Panterpe insignis in the vicinity of these plants, but Gary F. Stiles reports it to be another hummingbird, Phaetornis guy.